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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/799,308

03/13/2004

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23862 7590 02/19/2009
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EXAMINER

DAVIS, OCTAVIA L

ART UNIT

PAPER NUMBER

2855

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DELIVERY MODE

02/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/799,308	Applicant(s) COONEY, DANIEL E.	
	Examiner OCTAVIA DAVIS	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-19 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-19 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/6/09 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 – 5 and 9 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (5,605,873) in view of Ross (RE39044).

Regarding claims 1 and 3 – 5, Chang discloses a pressure sensitive verification system and use thereof comprising a material 14 having a surface, an indicator coating having an impact-sensitive component that produces a visible change when subjected to a mechanical impact, the indicator coating comprising a mixture of a first reactant and a second reactant separated by a barrier that is rupturable so that the reactants mix and produce the visible change upon the impact and

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inspecting the material for the presence of the visible change (See Col. 5, lines 35 – 44 and Col. 7, lines 12 – 21) but does not disclose providing a plurality of surface panels made from a composite material, covering the surface of the panels with indicating paint, visually inspecting the panels to locate a visible change and evaluating the panel for subsurface damage based on the visible change, wherein the inspection includes X-ray and acoustic inspection and the panels are assembled to form an aircraft. However, Ross discloses a perimeter coating alignment device comprising a plurality of panels 6 of a composite material (See abstract, See Fig. 3B), covering the panels with coatings or paint 5, 5A, 5B (See Col. 5, lines 52 - 55 and Col. 79, lines 17 - 28), inspecting each panel to locate a visible change using X-ray and acoustic inspection means (See Col. 22, lines 29 – 49 and Col. 79, lines 2 - 15), evaluating the panel for subsurface damage (See Col. 79, lines 2 - 15) and the panels being assembled to form an aircraft (See Col. 52, lines 6 – 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chang according to the teachings of Ross for the purpose of, advantageously controlling the location of and limiting the perimeter of one or more types or combinations of coating on one or more bases or coatings on or in other surfaces or materials (See Ross, Col. 5, lines 5 - 10).

Regarding claims 9 and 10, in Chang, a light absorbing compound is incorporated into the rupturable barrier and a chromogenic compound enabling the chromogenic compound to react with the color developer (See Col. 7, lines 22 – 26 and 40 – 46).

Regarding claim 11, in Chang, the material is accurately monitored during a series of tests (See Col. 10, lines 22 - 37).

Regarding claims 12 and 13, in Chang, a design criteria is established for the material for various configurations (Col. 10, lines 22 – 37).

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4. Claims 2, 14 – 19 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Change (873') and Ross (044'), as applied to claims 1, 3 – 5 and 9 – 13 above, and further in view of Szweda et al (5,488,017) and Carper et al (7,090,894).

Regarding claims 2, 14 and 25, Chang and Ross disclose all of the limitations of these claims except for a teaching that the material has a tensile elongation to failure of less than about 2 percent and the composite material is prepared for an aircraft. However, Szweda et al disclose a fiber reinforced ceramic matrix composite member comprising a reinforced ceramic matrix composite member represented by curve 2 having a percent elongation of failure in excess of about 0.4% (See Col. 8, lines 21 – 23). Carper et al disclose a bond coat for the application of tbc's and wear coatings to an oxide ceramic matrix comprising ceramic composites for use in aircraft gas turbine engines (See Col. 1, lines 11 – 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chang and Ross according to the teachings of Szweda et al and Carper et al for the purposes of, producing ceramic composite articles including a method of controlling the porosity in the matrix of a ceramic matrix composite material to curb undesirable porosity (See Szweda et al, Col. 3, lines 24 – 28) and advantageously providing a composition that is inexpensive to make, easy to form and apply in a consistent manner and that tightly adheres to both the substrate and the coating for providing enhanced durability improvement (See Carper et al, Col. 2, lines 1 - 5).

Regarding claims 15 and 16, in Chang, a light absorbing compound is incorporated into the rupturable barrier and a chromogenic compound enabling the chromogenic compound to react with the color developer (See Col. 7, lines 22 – 26 and 40 – 46).

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Regarding claim 17, in Chang, the material is accurately monitored during a series of tests (See Col. 10, lines 22 - 37).

Regarding claims 18 and 19, in Chang, a design criteria is established for the material for various configurations (Col. 10, lines 22 – 37).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Georgeson et al (7,434,480) disclose methods and systems for using active surface coverings for structural assessment and monitoring.

Alfano et al (6,495,833) disclose a sub-surface imaging under paints and coatings using early light spectroscopy.

Vernon et al (4,924,182) disclose an eddy current method to measure distance between scanned surface and a subsurface defect.

Webster (5,616,865) discloses an acoustic wave generating apparatus.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OCTAVIA DAVIS whose telephone number is (571)272-2176. The examiner can normally be reached on Mon-Fri 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lisa Caputo can be reached on 571-272-2388. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OD/2855

2/13/09

/Lisa M. Caputo/
Supervisory Patent Examiner, Art Unit 2855